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NASHVILLE JOURNAL OF MEDICINE AND SURGERY

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E. S. McKEE, M. D., Cincinnati, Associate Editor
W. T. BRIGGS, M. D., Associate Editor

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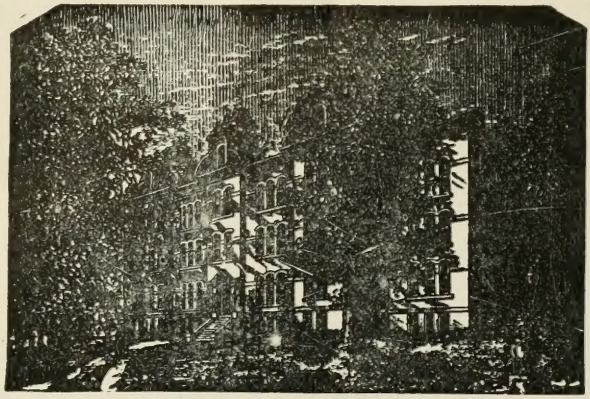

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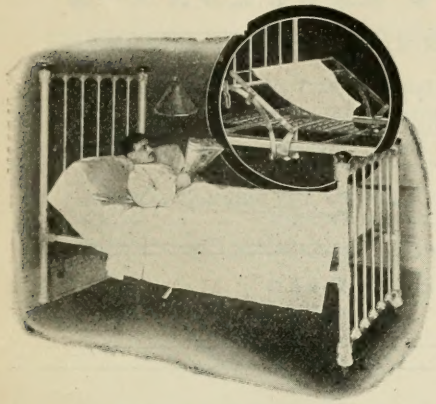

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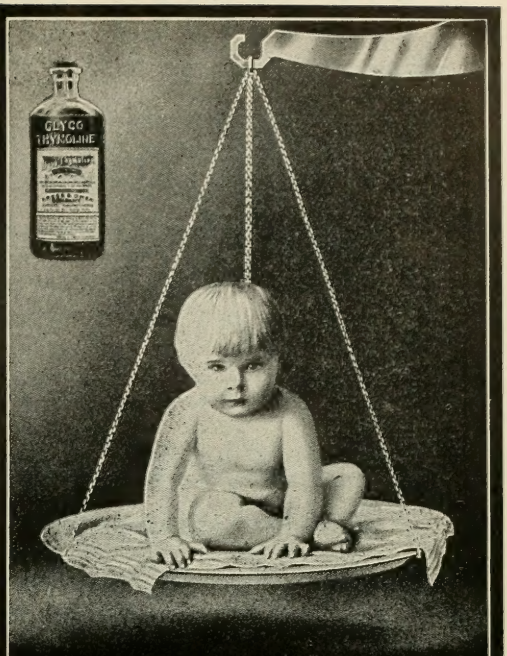

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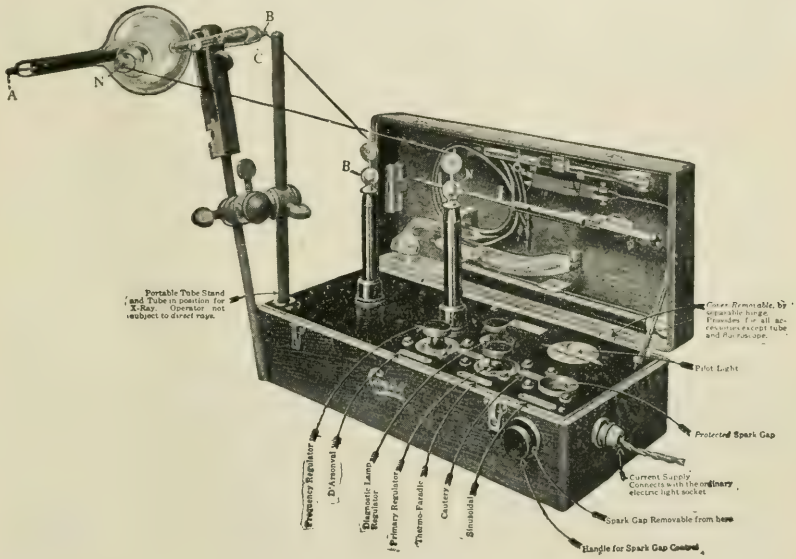

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—OF—
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CHARLES S. BRIGGS, A. M., M. D., Editor
W. T. BRIGGS, M.D., Associate Editor.

VOL. CIX. JUNE, 1915. No. 6

Original Communications

SURGERY IN GALL BLADDER DISEASE.*

BY W.T. BRIGGS, M.D.

In a short paper dealing with such a broad subject it is neither suitable nor desirable to go into a minute description of the preparation of the patient for operation. Suffice it to say the preparation should be thorough internally and externally, and to mention the fact that in many cases it is desirable to build the patient up with tonics, rest in bed, etc., for some time before undertaking the operation.

If jaundice has been present for any length of time, or is very marked, though of short duration, Robson advises calcium chloride in ½-drachm doses three times daily for several days previous to operation and also drachm doses of the same chemical in nutrient enemata for two days previous to operation. While he and others claim good results from this treatment, Bland Sutton has noticed no change in the tendency to oozing in those cases in which he has tried this treatment. Sutton claims adrenalin cloride gives better results. Murphy has been trying coagulose with apparently good results. If the foramen of Winslow is patulous,

*Read before the Nashville Medical Symposium Society.

palpation of the suprarenal gland might have the same effect as the administration of adrenalin. There is little doubt in the writer's mind that it is the direct stimulation of the sympaththetic through the suprarenal that helps control renal hemorrhage when that organ is incised for stone. Atropine in large doses, by stimulating the sympathetic should help control the hemorrhage. In spite of all treatment hemorrhage may be a serious factor in any case where jaundice is severe, and for that reason operation should be avoided *if possible,* so long as jaundice is present.

The anesthetic—Since many internists and surgeons believe the heart is weakened very much in gall bladder disease of long standing, great care should be exercised in choosing both the anesthetic and anesthetist. Crile says any lipoid solvent anesthetic is absolutely contraindicated with the liver in such a damaged condition as is apt to be the case. Gas and oxygen is probably the safest anesthetic. Since the vitality of the patient is lowered, and any shock incident to the operation apt to be exaggerated, the line of skin incision should be injected with 1% adrenalin and novocaine solution, and the other tissues infiltrated with the same solution as they are encountered. If the local anesthesia is successfully used, it means not only less shock but also less general anesthetic. Paravertebral anesthesia with novocaine solution is proving successful in the hands of some. It is our opinion that A. C. E., combined with local anesthesia, is usually better than either ether or chloroform alone, since ether alone is apt to increase the oozing and the tendency to pneumonia, while chloroform alone gives us too much of that lipoid solvent which Crile fears, especially when the liver is damaged.

Position of the Patient—A sandbag, or inflatable rubber bag, should be placed under the patient so as to elevate the costal arch, push the liver forward and cause the intestines to fall toward the pelvis. It is needless to emphasize the importance of placing the patient in the position which will afford the operator the best light after the cavity is opened.

The Incision—If there is an abscess of the gall bladder the incision should be made over the most prominent part of the tumor. This is sometimes in the neighborhood of the umbilicus, the pus

being conveyed there along the falciform ligament; oftener, however, it points to the right and above that landmark. At times such an abscess points near the ensiform cartilage or in the groin. After the pus is evacuated careful search must be made in order to remove all stones, since a sinus will persist if any stones remain to block the cystic duct. If the patient comes to the surgeon with a fistula resulting from previous rupture of an abscess of the gall bladder, it is necessary to enlarge the opening and remove the stones with finger or scoop.

In most other cases the best incision is one over the right rectus muscle, extending vertically downward four or five inches from the lower margin of the costal arch. Such an incision can be supplemented if necessary by an additional incision upward and inward as far as the costo-ziphisternal notch and by an extension downward and outward from the lower end. However, the intestines are apt to give the operator more trouble if the incision is lengthened below and this should be avoided if possible.

After separation of the fibres of the rectus, the operator may find the posterior layer of the sheath and the peritoneum markedly thickened; sometimes the peritoneum is adherent to the fundus of the gall bladder and occasionally the fundus is non-adherent while the liver and other organs are completely concealed by a dense mass of adhesions. If the latter condition is present, probably a cholecystostomy without any attempt to break up the adhesions, is the best procedure.

Should the incision open into a cavity relatively free from adhesions in the immediate neighborhood of the gall bladder and ducts, a thorough exploration of the pyloric end of the stomach, the duodenum, the appendix, the common, cystic, and hepatic ducts and the head of the pancreas, should be made. It is often necessary to break up some adhesions in order to make this exploration thorough. Of course if the gall bladder is very much distented with fluid, it may be absolutely necessary to drain this off before attempting any exploration. If possible, however,, a thorough examination should be made before soiling the field of operation. In a recent case of hydrops of the gall bladder which we operated, the organ was larger than a grape fruit, and dis-

tended to the point of bursting. In such a case exploration before draining was out of the question.

If exploration reveals a cancer of the head of the pancreas, little can be done. If the jaundice, which often accompanies that condition, has lead to an intolerable pruitus and a hemorrhagic tendency, Bland Sutton says that in certain selected cases a cholecystenterostomy or a cholecystostomy might give some relief. Such operations are necessarily extremely dangerous. If cancer of the pylorus or duodenum is found to be present a posterior gastroenterostomy should be performed. In these cases also a cholecystostomy or cholecystenterostomy is sometimes indicated. Instead of the above mentioned conditions, the surgeon may find the gall bladder joined to the stomach, duodenum or transverse colon by adhesions. The adhesions in such cases should be gently broken up, and if there is an opening in the organ to which the gall bladder is adherent it should be closed with a double row of sutures. The condition of the gall bladder itself will often determine whether a cholecystostomy or a cholecystectomy should be done.

If exploration reveals an ulcer of the stomach or duodenum, or an abscess or ecchinococic cyst of the liver, then the treatment should be according to the dictates of modern surgery. If cancerous nodules are present in the liver, the operation had best end as an exploratory one.

If the pathology is confined to the gall bladder, then the surgical treatment depends on the nature of that pathology. If the gall bladder wall is normal in appearance, though slightly distended; if the fluid on aspiration is nonpurulent; if, furthermore, examination shows the cystic and common ducts patulous after removing stones, and the patient is under forty years of age, then cholecystostomy should always be the operation of choice. If, however, any of the following conditions are present we think cholecystectomy should be seriously considered, though not necessarily performed, since the patient is often in such a condition that this more serious operation would be the straw to break the camel's back. Furthermore, cholecystostomy often brings permanent relief, even in such a serious condition as commencing gangrene of the gall bladder.

Cholecystectomy should be considered in:

1. Wounds so large as to make suture of the bladder impracticable.
2. Primary cancer of the gall bladder not involving the liver, hepatic or common ducts.
3. Purulent cholecystitis.
4. Phlegmonous cholecystitis.
5. Axial rotation of the cystic duct.
6. Atrophy or sclerosis of the gall bladder.
7. Hour glass constriction and diverticula.
8. Stricture of the cystic duct as well as impacted stone.
9. Gangrenous cholecystitis.
10. Actinomycosis.
11. Cholelithiasis in those patients over forty years of age since fully 90% of primary carcinomata of the gall bladder are supposed to result from the chronic irritation incident to calculi.

In looking over this list you find only a few conditions in which cholecystectomy is absolutely indicated, and as pointed out above, the patient's resistance should often be a determining factor, to say nothing of the operator's skill.

If, however, in addition to the gall bladder pathology the surgeon finds the common duct absolutely blocked because of cancer of the pancreas or duodenum, or stricture, or aneurysm of the hepatic artery or any irremediable cause, then it seems the best practice to save the gall bladder if possible in order to divert the bile into the intestine or to the exterior. Examination of the ducts may disclose a stone in the cystic, hepatic or common ducts. In any case it should be removed.

Technic in cholecystostomy—One can use the vertical incision mentioned above or if he prefers he can use the transverse or the oblique incision which runs parallel to the costal arch or the gridiron incision.

After exposing the gall bladder and before drawing off the fluid, the general peritoneal cavity should be thoroughly walled off with pads. This wall can be made more protective by slipping a square of rubber tissue such as dentists use under the gall bladder as far as the neck and then fastening the extraperitoneal part

to the skin with clips. By using this rubber the bladder is swung in a hammock and a great deal of the fluid escaping will not even reach the pads.

If the gall bladder is distended it should be punctured and some of the fluid withdrawn before attempting palpation. If it is not distended it can be examined for stones before withdrawing any of the fluid.

If puncture is made, then as much fluid as possible is drained through the canula. The canula is now withdrawn, the edges of the opening grasped in forceps, a Mayo spoon slipped under the bladder and the puncture hole enlarged with scissors. After most of the fluid has been removed careful search with the scoop and finger should be made for stones, taking care not to push any stones into the cystic duct nor to leave any in the neck of the bladder. In some cases the fluid is so gelatinous that it will not flow, either through the canula nor through an incision. In such cases it is necessary to remove the mass piecemeal or entire. Stones are often found embedded in such a mass. After removing all stones, a drainage tube is placed in the gall bladder and a purse string suture of catgut passed around the opening. A second purse string suture is passed about a quarter of an inch outside the first. Both of these sutures can be made to grasp the tube, though it is usually sufficient if only the first is used for that purpose. After these sutures are passed the tube is pushed into the bladder and then the sutures are tightened. After this the field of operation is cleared, the sponges counted and the wound closed except where the tube protrudes. Before closing the wound the sandbag should be removed. If the secretion coming from the gall bladder was purulent a second drainage tube should be placed so as to drain the hepato-duodenal fossa.

The protruding end of the drainage tube or tubes should be connected with another tube leading into a large bottle of some antiseptic solution. In this way the drainage can be watched and measured, and it is not necessary to disturb the patient by frequent dressings.

Cholecystendesis—This operation is the same as cholecysostomy except that after removing the fluid and stones, the bladder is sutured. It is seldom performed at the present time.

Cholecystectomy—The preparation of the field of operation in the abdomen should be similar to the one used in performing a cholecystostomy, except the rubber tissue may be in the way. If the bladder is distended it may have to be drained before trying to work on the cystic duct. If possible, however, the bladder should be left intact. If the region of the duct is free the operation can be commenced by locating the cystic duct, clamping it and then passing a ligature in an aneurysm needle around the duct and cystic artery proximal to the clamp. The duct and artery are then divided between the clamp and ligature. After this the gall bladder can be stripped from the liver after dividing the peritoneum along the line of reflection from the liver to the gall bladder. Any hemorrhage should be controlled with gauze pressure. Small pieces of muscle can be stitched to any points where the hemorrhage is persistent.

If the adhesions around the neck of the bladder and the duct are very dense, then it is best to first separate the gall bladder from the liver, and while pulling gently on the gall bladder, dissect out the neck and cystic duct, after which the duct can be ligatured and divided. If the artery isn't exposed in this dissection it will be found in the adhesions which still connect the gall bladder and common duct. Another method consists in simply dividing the cystic duct without placing any ligature.

Whether the duct is ligatured or not, a drainage tube should be attached to the stump and a second tube should be placed in the hepato-duodenal fossa. The protruding extremities of these tubes should be treated as described above.

Cholecystenterostomy—This operation should always be performed with sutures as in lateral anastomosis of the intestines. While it is easier to use the Murphy button it is less satisfactory, since there is always some danger of the button falling back into the gall bladder.

Choledochotomy—Often this operation is performed in conjunction with a cholecystostomy. The operation may be on that part of the duct above the first part of the duodenum, or on the retroduodenal portion. Since the supraduodenal operation is the easier, attempts should always be made to push a stone in the

retroduodenal portion of the duct into the more accessible supraduodenal portion. Such attempts must be gentle and are not often crowned with success. The depth of the wound and the close relation of very important structures make this a rather difficult operation in most cases. Furthermore, there is occasionally present an anomalous right hepatic artery coming from the superior mesenteric lying to the right side and in very close relation to the common duct which might give trouble. We have found this artery twice in the dissecting room this winter.

After exposing the duct in the free edge of the gastrohepatic omentum the surgeon fixes it, if possible, between the forefinger and thumb and incises the duct longitudinally over the stone. After removing the stone the duct is carefully explored with the probe, and if dilated enough, with the finger also.

After the ducts are found free and any oozing controlled, a drain should be sutured into the duct, brought out of the wound and treated as described above. Retroduodenal choledochotomy can be performed by incising the peritoneum to the right of the duodenum, mobilizing that organ, locating the stone, removing it and draining, or by the transduodenal route. In the latter operation the anterior wall of the duodenum is opened, the opening of the duct located and enlarged with scissors, the stone removed and the wound in the anteriar wall of the duodenum closed. The cut in the ampulla is not sutured. Drainage should be used as in the other operations, though in the transduodenal operation some surgeons do not drain.

Hepaticotomy is seldom performed, since stone in the hepatic duct is usually complicated by stone in the common duct and all the stones are removed through the opening in the common duct.

The other operations performed in connection with gall bladder disease are so seldom done that it is not necessary to mention them in a paper of this type.

Selected Articles

THE MEDICAL TREATMENT OF PEPTIC ULCER WITH ESPECIAL REFERENCE TO THE LENHARTZ TREATMENT.

By George Blumer, M.D.

The question of the most efficient medical treatment for those patients with peptic ulcer who properly come under the care of the internist can not be said to be definitely settled. There is a fairly substantial agreement that patients suffering from certain types of peptic ulcer should develop surgical rather than medical treatment, and even internists would nowadays hardly agree with Minkowski's dictum, "that every case of gastric ulcer should be treated medically once." Ulcer patients with acute perforation, those with pyloric obstruction even in the early stages, those suffering from the results of repeated small hemorrhages intractable to medical treatment, and those with subphrenic abscess, hourglass stomach, or serious perigastric adhesions, had all best pass into the hands of a competent surgeon without delay. On the other hand, the great majority of patients with hemorrhage of the fulminating type, those with acute ulcers, and those with uncomplicated chronic ulcers, should certainly have the benefit of a carefully regulated and supervised medical regimen before being submitted to the knife. This is the case in the group last mentioned, notwithstanding the one great drawback common to all forms of medical treatment, the long duration of the cure.

The regimens now in use in the treatment of peptic ulcer have certain essential features in common, such as absolute rest, the use of certain accessory medicaments, external applications of heat or cold to the epigastrium, and certain principles regarding the care of the bowels. It is true that universal agreement as to the period of absolute rest, the efficiency of bismuth or the alka-

lies, and the desirability or undesirability of forcing the bowel movements during the first week after hemorrhage does not exist, but it is fair to state that there is substantial agreement on these points. The contrast between the different systems lies essentially in differences in the diet, and it is from the dietetic point of view that they are best compared. A classification based upon very strict dietetic grounds is, however, hardly possible, as all of the prevailing types of diet have submitted in the hands of others than their originators to more or less considerable modifications, and these have resulted in overlapping. Three fairly shaped defined groups of diets can, however, be recognized; one in which more or less complete abstention from mouth feeding is the predominant feature, typified by the Leube cure; one in which immediate feeding with albuminous food is the essential peculiarity, typified by the Lenhartz diet; and one in which fats constitute the important source of nourishment, typified by the diets of Strauss and Jarotsky. The diet of Loeper, in which sugar constitutes the sole nutritive element, is not comparable with those already mentioned, as it is a temporary diet for a certain type of case, namely, the patient with the so-called "irritable" ulcer.

The regimen of v. Leube[1] is the lineal descendant of the milk diets of Cruveilhier and v. Ziemssen. The essential features of the cure are: Rest in bed; daily use of luke-warm Carlsbad water; the application of hot poultices and Priessnitz compresses to the epigastrium: and a diet mainly of milk in increasing quantities, fortified after ten days by the addition of cereals and finally by meat. In bleeding ulcers, with nutrient enemata, an ice bag to the epigastrium, and adrenalin, bismuth, and morphine medication. The principal underlying this diet is that to encourage healing of the ulcer the stomach must be spared from work as much as possible, and that in bleeding ulcers the organ must be given complete rest for a time.

Modifications of the Leube diet have taken two opposite directions. On the one hand, we find starvation as a means of resting the stomach carried to extremes in the regimen advocated by Rolleston, Wynter, and others of the English school of clinicians

[1] Full details of the different regimens will be found in the appendix.

who give the patient no nourishment at all for periods of 10 days or longer; on the other hand, we find diets like those of Einhorn, Albu, and Boas, which increase the caloric value of the Leube diet by the addition to it of easily digestible and non-irritating nutriments.

The essential features of the Lenhartz regimen consists of absolute rest in bed for at least three weeks, an ice bag to the epigastrium until no occult blood appears in the feces, the routine administration of bismuth in all patients and of soft Blaud pills in anæmic patients, and a non-irritating and non-stimulating diet of concentrated albuminous food given by the mouth from the onset of treatment and gradually increased in caloric value. The principles underlying this diet are: First, that hyperacidity plays an important role in preventing healing and that free acid must be neutralized by acid-binding food; and, second, that the general nutrition must be maintained and anæmia must be combated to favor healing of the ulcer.

Diets which depart to a greater or less degree from the Lenhartz diet have appeared since Lenhartz first proposed his regimen in 1901. In this country slight modifications, which make the diet more suited to American tastes, have been proposed by Samuel W. Lambert and others. In England, the diet of Hart, though proposed on different theoretical grounds, is a concentrated albuminous diet and best classed in the Lenhartz group. Senator agrees with Lenhardz regarding the advisability of introducing nourishment into the stomach early in the treatment, and regarding the neutralization of hydrochloric acid as an important part of the treatment. His diet aims to neutralize the acid by means of fats and sugars as well as proteins, and he also adds gelatinous substances both for their nutritive and hemoctatic qualities. A good many German clinicians use the Lenhartz diet in patients with bleeding ulcers after a few days of starvation with rectal alimentation, regimen which was suggested by Friedrich Mueller in the discussion on Lenhartz's paper at the German Congress of Internists in 1909.

Two diets which have apparently not been widely used, and which are based on the high caloric value of fats and their power

to inhibit gastric secretion, are those of Jarotsky and Strauss. Jarotsky's diet consists of white of egg and olive oil given separately, several hours apart, in increasing daily doses. Strauss uses a mixture of cream and yolk of egg either beaten up with sugar or rubbed up with buutter.

All of the diets outlined above have their advocates, and all their opponents, and it can not be denied that each has advantages and drawbacks that must be recognized if we are to intelligently treat our ulcer patients. The advantages are usually fairly obvious, the objections may with profit be discussed at some length.

The objections which have been urged against the Leube diet seem partly based upon general impressions and partly on statistics. Lenhartz, for example, says that frequent recurrences occur after this regimen, but as frequent recurrences occur after all forms of medical treatment, and as there is no large series of statistics covering this point, his statement loses force. The usual objections to the Leube cure may be briefly sketched as follows: The routine is prolonged and tedious; in bleeding cases the stomach is not completely at rest as there is hunger peristalsis and the nutrient enemata excite gastric movement; that gastric juice may be secreted even by the empty stomach; that under nourishment and even acidosis may occur, and that the former militates against the healing of the ulcer; that there is difficulty in keeping the mouth clean; that annoying vomiting may occur; that the nutrient enemata contain very little nourishment, are dirty, time-consuming, and can not be used in the homes of the poorer classes unless trained nursing is available; that the milk over-distends the stomach and increases the pain. When the strenuous starvation of the English school is used, new terrors are added, thirst and a tendency to parotitis which, when it developes, may prove fatal.

It is only fair to say that while there is undoubtedly truth in some of this formidable list of objections, many have been answered by Leube and his adherents. The best answer lies in Leube's record of a mortality of only 2.5 per cent in patients with bleeding ulcers, and 90 per cent of immediate recoveries in all types of cases. That a routine is prolonged and tedious is not a

serious objection if it results in the cure of a much more prolonged and tedious disease. If the empty stomach is not completely at rest, it is surely as fully at rest as one in which food is being introduced every hour.

The under-nourishment occurring in the Leube cure is not as a rule severe, and 42% of the patients actually gain weight. Annoying vomiting may occur in some patients under any regimen, and nutrient enemata are now universally recognized as at best a temporary expedient which is, however, from 400 to 1000 calories per day better than no nourishment at all. That 250 cubic centimeters of milk, the maximum dose under the Leube cure, should distend an organ capable of holding two liters seems open to doubt.

The objections to the Lenhartz cure have been almost as numerous as those urged against the Leube regimen. Many clinicians strongly object to the immediate feeding of patients with bleeding ulcers, though fairly extensive comparative figures of the Leube and Lenhartz cures show that fewer recurrences of the bleeding during treatment occur with the Lenhartz than with the Leube cure. The objection is frequently made that in some patients the smallest quantity of food causes severe vomiting, and this is undoubtedly true in the so-called irritable ulcers. Objection to the raw eggs on the part of patients is stated to be not uncommon, and the milk and raw meat are also cited as causes of distress and distention. Several object to the administration of meat as early as the sixth day, and frequent criticism of the Blaud pills on the ground of gastric irritation are found in the literature. As in Leube's case, Lenhartz's best answer to these criticisms is a mortality of 2.3 per cent in bleeding cases, and 90 per cent of patients with immediate relief. Doubtless all of the objections raised have been true of individual patients, but (and this is true of objections to any recognized routine treatment) they are not generally true.

The one great objection to the fat cures (Strauss, Jarotsky), and to a lesser extent to the Senator cure, which contains a good deal of fat, is the inability of most patients to tolerate the large quantities of fat which they contain. This intolerance is quite widespread among the inhabitants of temperate climates, and

doubtless accounts for the fact that the fat regimens, theoretically so desirable, have not been more widely used. Even the advocates of fatty dietaries recognize their limitations, but, as one would expect, they fail to emphasize them as forcibly as impartial observers.

The results obtained by these different regimens are difficult to compare for several reasons. But few observers are able to present reports of series of cases large enough to give confidence in their statistical value. No figures are available which adequately cover the remote effects of the different treatments. The value of statistics in ulcer cases, especially statistics covering small groups, is more or less invalidated by the great variations in the natural history of the disease, and by the fact that it is impossible in any series medically treated to be sure that the diagnosis was always correct. Some of the large series of statistics are undoubtedly of value and may be briefly summarized. Leube treated 627 patients with a total mortality of 0.3 per cent, and a mortality in bleeding cases of 2.5 per cent. Only 1 per cent of his patients showed no improvement under treatment, and 90 per cent showed complete relief of symptoms on their discharge. Lenhartz's 295 patients were all subject of bleeding ulcer, and both his subjective cures and his mortality (2.3 per cent) are almost identical with the results of Leube. Figures covering surgical treatment are available but cover such a different type of cases that they are not fairly comparable. No other large series covering mortality and subjective cure under medical conditions seems to be published.

Our experience with the Lenhartz diet in New Haven[2] covers 27 cases treated by that diet with unessential modifications. I feel that while the number of patients treated is too small to allow us to draw any statistical conclusions of value, it is allowable to record certain definite impressions which we have received. In general, it may be said that the Lenhartz diet is, as a rule, eminently satisfactory from the patient's point of view. The pain accompanying the disease usually disappears within a few days, and we can substantiate the claim of Lenhartz that narcotics are seldom

[2] The cases occurred in the service of my confrere, Dr. Tileston, and myself, in the New Haven Hospital, or were seen in consultation.

necessary. The patients seldom complain spontaneously of hunger, though, when questioned, they sometimes admit its presence. Most patients lose weight during the first week or ten days, but many of them regain it before the cure is ended, and some considerably surpass their weight on entrance, when discharged. In patients followed after discharge, great gains in weight are sometimes noted, as much as 30 pounds in one patient.

In none of the published statistics can I find any distinction between gastric and duodenal ulcers as regards the efficacy of the Lenhartz cure. Thirteen of our patients were suffering from the symptoms of duodenal rather than gastric ulcer, and ten of these were entirely free from symptoms or signs of the disease at the end of treatment. All were benefited, there being no absolute failures. Five of them have remained well over a year and a half. In only one of those apparently cured have we a report of a relapse, and this occurred after eight months. This is a decidedly better record than is shown by our fourteen gastric cases, two of which were absolutely unbenefited, one of them after two treatments, and four of which relapsed, three after short periods. While it is hazardous to draw conclusions from such small numbers of patients, I can not help feeling that patients with gastric ulcers do less well on the Lenhartz diet than those with duodenal ulcers, and that this is due to the element of stasis being much more prominent in certain stomach ulcers, even when actual pyloric stenosis is absent.

Our experience with the Lenhartz diet also allows us to substantiate some of the objections made to it. In several instances, patients were unable to tolerate the raw egg diet, even when the eggs and milk were mixed. In some instances this was due to the fact that cold storage eggs were the only ones available at the time, rather than to any intrinsic objection to the egg as an article of food. This is, nevertheless, a real objection in patients with sensitive palates. In one or two instances the milk in the diet disagreed and had to be discontinued. In both the case of the eggs and that of the milk, the disagreement took the form of vomiting, often accompanied with a temporary return of pain. The raw meat of the original diet we did not employ, but substituted minced

chicken, as suggested by Lambert. American observers, Gilbride for example, have noticed that the American stomach is intolerant to the raw meat and ham of the original Lenhartz regimen. We have on two occasions noted a return of hemorrhage during treatment, though this was not serious. We would also point out that a gain in weight is by no means always to be expected, and that while pain usually disappears early, tenderness remains much longer and is often present well along in the cure.

A critical study of the literature of the medical treatment of peptic ulcer, particularly the rest and diet cures, suggests certain conclusions. It seems safe to assume that certain types of peptic ulcer show a strong natural tendency to heal if given a fair chance. Ulcers near the pylorus tend to heal badly, while bleeding ulcers, for reasons not entirely clear, seem to heal unusually well. Many ulcers would doubtless heal on the all-important complete rest, plus any of the dietary regimens that have been discussed. Others would equally certainly fail to heal under any form of medical treatment. Originators of diets are apt to adhere too closely to those diets and tend to become prejudiced against different, but equally efficacious ones. The practitioner, whose sole purpose is to cure his patients, and who need not be distracted from this by attempts to glorify the products of his own cortical cells, should realize that there are good points in all of the diets presented. Each has its advantages and each its drawbacks, and the wise physician is he who will use them as frameworks to be clothed with a dietary structure suitable to the needs of each individual patient.

APPENDIX.

THE VON LEUBE REGIMEN.

1. Absolute rest in bed one to two weeks; in the average case, 10 days. From the 11th day on for a period of several weeks, the patient must rest one to two hours after the principal meals.

2. One-quarter liter of lukewarm Carlsbad water one-half hour after breakfast for the first four weeks.

3. Hot flaxseed poultices to the epigastrium, changed every 10 to 15 minutes, and kept on from 8 a. m. to 8 p. m. Before applying the poultices, the skin should be thoroughly cleansed, and a borax-wax ointment should be applied. From 8 p. m. to 8 a. m., a Priessnitz compress is applied in-

stead of the flaxseed poultice. If blisters form, which is not uncommon from the third to the tenth day, empty, wash with ether, dust with dermatol. Poultices must only be used if there has been no history of bleeding for three months.

4. The following diet in the form of three main meals and two accessory meals daily. The food must be measured accurately, and never more than 250 cubic centimeters of milk given at a feeding.

First 10 days, cooked milk, meat juice once a day, bouillon, softened Zwiebach, and cakes not sweetened. Two pieces of Zwiebach and four cakes allowed daily.

From 11th to 17th day, the first diet, plus mucilaginous soups, rice and sago cooked soft in milk, with beaten-up eggs. Soft-boiled and raw eggs, calves' brains, and young chicken and pigeon.

From the 18th to 22nd day, well-cooked calves' feet, thin sliced raw ham, thin sliced rare beefsteak, mashed potatoes, bouillon containing mashed rice, a little coffee and tea.

From the 23rd to 30th day, lean roast beef, underdone broiled chicken and pigeon without sauce, venison and partridge which have hung until tender, macaroni, cut-up noodles beaten through a sieve, and a little white bread.

From the 5th week on, cold veal or pike, light souffles and desserts of rice, sago, and maizena, and one to two glasses of a pure wine are allowed.

Patients with bleeding ulcers have:

1. An ice bag to the epigastrium.
2. Complete starvation for from one to three days.
3. During the period of starvation, nutrient enemata.
4. No cathartic should be given to these patients during the first week.
5. Adrenalin, bismuth and morphine medication.
6. After the period of starvation, the regular regimen.

ALBU'S DIET.

8 a. m., one-quarter liter milk.

10 a. m., one egg, soft-boiled or beaten with sugar.

12 midday, one plate of rice thoroughly boiled in milk, or a puree of grits or oatmeal with cream and sugar.

2 p. m,. one plate of thick bean or sago soup, strained, with butter and the yolk of one egg.

4 p. m., one-quarter liter milk or cream, with two teaspoonfuls of Odda or Hygiama.

6 p. m., one soft-boiled egg with 10 grams of butter.

7:30 p. m., one plate of strained tapioca with milk, or an omelette souffle made with two eggs.

9:30 p. m., one-quarter liter milk.

Caloric value of diet, 1500.

This diet is given for the first week. After this, the number of eggs is doubled. After three weeks, calves' foot or chicken jelly, finely chopped beef, lightly cooked, minced ham, and bread and butter is allowed. Patients are kept on this diet for several weeks and are kept in bed from eight to ten days.

EINHORN'S DIET.

In bleeding cases, rectal feeding from three to five days, with small quantities of cracked ice and gelatin by mouth. After bleeding is over, or in non-bleeding cases, the following diet:

First three days. Hourly feeding from 7 a. m. to 9 p. m., inclusive. At each feeding, 150 cubic centimeters of milk, except at the following hours: At 10 a. m., milk and strained barley; at 1 p. m., 150 cubic centimeters of bouillon alone, or with the addition of 1 to 2 drams of peptone; at 5 p .m., strained barley or oatmeal is added to the milk again.

4th to 10th day. Feeding every two hours from 7 a. m. to 9 p. m. 300 cubic centimeters of milk are given at a dose. At 11 a. m. and 7 p. m., strained barley, rice, or oatmeal are added. At 1 p. m., 200 cubic centimeters of bouillon into which an egg is beaten, is substituted for the milk.

11th to 14th day. Feeding every two hours from 7 a. m. to 9 p. m. The milk is the basic ration in a dose of 300 cubic centimeters. At 9 a. m. and 5 p. m., two softened crackers are added to the milk. At 11 a. m. and 7 p. m., strained barley, rice, or oatmeal gruel. At 1 p. m., 200 cubic centimeters of bouillon with an egg beaten into it and two crackers take the place of the milk.

14th to 17th day. Feeding every two hours from 7 a. m. to 9 p. m. Basic ration, 300 cubic centimeters of milk, to which are added at 9 a. m., two crackers; at 11 a. m., barley, rice, or oatmeal gruel; at 5 p. m., one soft egg and two crackers; and at 7 p. m., farina. At 1 o'clock, 50 grams of scraped meat and 200 cubic centimeters of bouillon, with two crackers, are substituted for the milk.

17th to 24th day. 7 a. m., two soft eggs, 10 grams of butter, 50 grams of toast, and 300 cubic centimeters of milk. 10 a. m., 300 cubic centimeters of milk, with 50 grams of cracker and 20 grams of butter. 1 p. m., 50 grams of broiled lamb chops, 50 grams of mashed potato, 50 grams of toast, 10 grams of butter, and 200 cubic centimeters of bouillon. 4 p. m., same as at 10 a. m. 6:30 p. m., 300 cubic centimeters of milk and farina, 50 grams of cracker, and 20 grams of butter. 9 p. m., 300 cubic centimeters of milk.

Since 1903, the author has added raw eggs to this diet, beginning with two on the first day and increasing one a day until eight a day are taken. After two weeks, soft eggs may be substituted.

MIDDLESEX HOSPITAL REGIMEN (STARVATION DIET).

This diet is intended for cases with pain, vomiting, and hemorrhages, especially the latter.

1. Starvation until epigastric tenderness disappears, usually the 3d to 10th day. During the starvation period, give water per rectum, beginning with five ounces, increasing to eight and finally to 10. When the patient can tolerate 10, give this amount every four hours. Wash out the colon every morning with one to two pints of water.

2. Graduated feeding, beginning with equal parts of milk and lime-water, one ounce of each every two to four hours, gradually increasing dose and time interval. The milk may be thickened by Plasmon or Glidine.

3. Next, junket, custard, jellies ,and meat extracts are allowed. Still later, calves' and sheep's brains. When these are well tolerated, tripe, sweetbreads, stewed sheep's tongue, flat-fish and milk puddings are allowed. As the food is increased, the enemata are gradually discontinued.

The accessory medication consists of calcium lactate, 15 grains in 10 ounces of water every four hours per rectum, for hemorrhage; chloretone, 10 grains in 10 ounces of water per rectum, every four hours for restlessness and vomiting; oxygen inhalations a few minutes at a time for vomiting; and 10 minims of 3½ per cent solution of peroxide of hydrogen twice daily, in a capsule prepared at the bedside.

THE LENHARTZ REGIMEN.

1. Absolute rest in bed for at least three weeks—longer in severe cases.
2. Avoidance of all mental excitement.
3. An ice bag to the epigastrium for the first two weeks of the cure.
4. Bismuth subnitrate 30 grams, two to three times a day.
5. The following diet:

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Eggs	2	4	4	5	6	7	8	8	8	8	8	8	8	8
Sugar with eggs (gm.(	0	0	10	20	20	30	40	40	50	50	50	50	50	50
Milk, cc	200	300	400	500	600	700	800	1000	1000	1000	1000	1000	1000	1000
Raw chopped meat (gm.)	0	0	0	0	0	35	70	70	70	70	70	70	00	70
Milk rice (gm.)	0	0	0	0	0	0	100	100	200	200	300	300	300	300
Zwiebach (pieces)	0	0	0	0	0	0	0	([1])	2	2	3	3	4	5
Raw ham (gm,)	0	0	0	0	0	0	0	0	0	50	50	50	50	50
Butter (gm)	0	0	0	0	0	0	0	0	0	20	40	40	40	40
Calories	270	420	637	777	965	1135	1588	1711	2138	2478	2941	2941	3007	3073

[1]20 gm.=1 p.

The milk and eggs are given separately, according to the original diet, but may be mixed. A small amount of good sherry may be added. The milk and eggs are prepared in a covered glass tumbler surrounded with

cracked ice, and kept at the bedside. The feeding spoon is kept iced in the same manner. The patient is fed by spoonfuls by the attendant.

Up to the 10th day, food is given at hourly intervals from 7 a. m. to 9 p. m., the egg and milk mixture being divided into 15 equal portions. There is complete rest during the night.

From the 11th to the 14th day, the interval of feeding is made two hours, and the milk and egg in 6-ounce doses with ½-ounce of raw egg.

From the 7th day on, one-half of the eggs may be given in the form of soft-boiled eggs.

The solid food, rice, scraped beef, ham, and soft-boiled eggs, are best given at periods which would correspond during the health to regular meal hours.

As suggested by Lambert, finely chopped cooked chicken can be substituted for the raw meat and ham in the original diet.

The following table from Lambert gives the dietary in different form:

Day	Eggs	Milk.	Sugar	Scraped Beef
I.	2 dr. per dose; total, 2 eggs.	4 dr. per dose; total, 6 oz.		
II.	3 dr. per dose; total, 3 eggs.	6 dr. per dose; total, 10 oz.		
III.	½ oz. per dose: total, 4 eggs.	1 oz. per dose; total, 13 oz.	(?)	
IV.	5 dr. per dose; total, 5 eggs.	1½ oz. per dose; total, 1 pt.	(?)	
V.	6 dr. per dose; total. 6 eggs.	I4 dr. per dose; total, 19 oz.	30 gm.	
VI-	7 dr. per dose; total, 7 eggs.	2 oz. per dose; total, 22 oz.	40 gm.	36 gm. in 3 doses.
VII.	4 dr. per dose; total, 4 eggs. Also, 1 soft-boiled egg every 4 hrs.; total, 4 eggs.	2 oz. per dose; total, 25 oz.	40 gm.	70 gm. with boiled rice, 100 gm. in 3 doses.
VIII.	------do ----------	2½ oz. per dose; total, 28 oz.	40 gm.	Do.
IX.	------do ----------	3 oz. per dose; total, 1 qt.	40 gm.	Beef same. Rice, 200 gm. Zweibach, 40 gm. in 2 portions.
X.	------do ----------	Add cooked chopped chicken, 50 gm., also butter, 20 gm.	40 gm.	Do.
XI-XIV.	Interval of feeding made 2 hrs., milk given in 6-oz. doses, with ½ oz. of raw egg. Butter increased to 40 gm,, and various additions made, as detailed above.			

[1]20 gm. added to eggs.

In cases with hemorrhage, no attempt should be made to move the bowels for the first week; after this, enemata may be used. In cases not complicated by hemorrhage, enemata are also the best means of moving the bowels.

HORT'S REGIMEN.

1. Care of the mouth and teeth, with especial attention to pyorrhœa and caries.

2. Purgative pill every night for two weeks.

3. Restriction of the fluid intake. Tea, coffee, and alcohol absolutely forbidden. Soups, broths, beef-tea, and milk usually excluded.

4. Rest. -4 to 14 !days in bed, and 10 to 14 days in a reclining chair.

5. A dry protein diet, mainly meat at frequent intervals. For example:

Breakfast, toast with butter and lightly cooked eggs.

11 a. m., two to three ounces of raw beef juice, freshly made.

1 p. m., beef, mutton, or lamb, served as joint, steak, chops, or cutlet, lightly cooked and served in fresh gravy, without vegetables. This is the entire meal, except toast or one or two rusks, with butter if preferred. The amount of wheat is regulated by the appetite.

4 p. m., same as breakfast.

7 p. m., same as 1 p. m.

9 p. m., same as 11 a. m.

If there is pain in the night, small sandwiches of stale bread and pounded chicken are allowed. The diet is gradually worked up to during the first week. Once established, it should be continued for a month after the patient goes back to work.

6. Ten cubic centimeters of atoxic, sterile horse serum or sheep serum, three or four times a day, immediately after food, in half an ounce of cold water.

In bleeding cases:

1. Ice water through an oiled stomach tube.
2. Morphine and atropine.
3. Subcutaneous injections of horse serum.
4. No food for one to two days.
5. For three days, jellies, soft eggs and pounded chicken until all the hemorrhage ceases.
6. After this, the preceding diet.

JAROTSKY'S EGG AND OIL DIET.

The egg and oil are given separately, the egg in the morning, the oil in the afternoon, with several hours interval between them. At the beginning of the treatment, patients receive the white of one egg in the morning, and 20 grams of olive oil in the afternoon. Each day the white of one egg and 20 grams of olive oil are added to the amount given the day previously. The eggs may often be increased to eight a day, and the oil to 120 to 140 grams daily, or more, if the patient can tolerate it. In patients with bleeding ulcers, no food is given by mouth for two or three days, and during this period the patient receives nutrient enemata, or the egg and oil diet is restricted to one egg and 20 grams of oil daily, until the hemorrhage ceases. The nutrient enemata are given until the diet is increased to a point where the patient is taking the whites of several eggs a day; they are then gradually discontinued.

—*Johns Hoskins Hospital Bulletin.*

Extracts from Home and Foreign Journals.

SURGICAL

Treatment of Manifest Tetanus.

Manheimer-Gommes, Bull. ea Mem. de la Soc. de Med. de Paris, Dec. 11, 1914. The author does not insist on the extraction of the foreign body nor on the daily antiseptic lavage of the wound, with hydrogen peroxid, alkaline solutions, concentrated permanganate of potassium, etc. (Note: From the context, we are inclined to think that the use of the word insist is idiomatic and opposite to the English meaning, implying that he does not consider it necessary to dwell upon these methods). He prefers hypodermatic or intravenous administration of medicines, the buccal method being somewhat unreliable, the rectal and especially the spinal methods troublesome, particularly to the patient. 20-30 c. c. of serum, daily, seems to act as well as 50 c. c. and even the economy must be considered in military practice. He has not noted unfavorable results, except a slight and transient cardiac depression, with cyanosis. 2% phenol solutions, 1-3 c. c. a day, not over 1.50 c.c. at an injection are painless and no accidents arise from lack of aseptic precautions which are not always possible at the front. Chloral (by mouth or rectum) not over 15 grams a day. He has used hyoscyamine and morphine but no other narcotics. Constipation, retention of urine and bronchoplegia—paralysis of the smooth muscle of the branches and radicles of the bronchial tubes—with its tendency to bronchial infection, he considers due mainly to morphine and avoids its use.—*Buffalo Medical Journal.*

Scrotal Hernia Containing an Inflamed Appendix.

J. W., aged 25, was referred to me by Dr. W. Hutchinson, complaining of pain in a hernia. On examination, the patient had a

large scrotal hernia, partly reducible; temperature 88½; pulse 80. He had some vague abdominal pains, but no tenderness except on pressure. A Bassini operation was done June 17, 1914, at St. Peter's Hospital. The entire cecum and appendix were in the hernial sac. On lifting up the cecum, a gangrenous appendix presented. This was removed and the operation completed as usual. The internal ring was very large and was closed by a purse string suture, in addition to the usual ligation of the sac. The convalescence was normal and the scar is now firm.

The point of interest in this case is the fact that this man had a very sick appendix with no symptoms suggesting such a condition. *Long Island Medical Journal.*

The Inlay Bone Graft Versus Lane Plates in the Treatment of Fractures.

The author employs a bone graft inlaid in the fragment as a substitute for Lane's plates in those fractures that require operative treatment. Such treatment, however, should be resorted to only when reduction and fixation can not be accomplished by the ordinary methods of dressing fractures.

Bone inlay work can be done quickly and accurately by means of the electro-motive equipment which the author has assembled and in part devised. The electric motor with sterilizable shell and single and twin circular saws, drill and dowell are, indeed, almost necessary in these operations.

There can be no doubt that the autogenous bone graft is a reliable surgical agent, although there is still some academic discussion as to the precise role it and its constituent parts play. That it acts as a true living graft and is osteogenetic in itself under certain conditions has been demonstrated by many observers.

Furthermore, a graft will adapt itself to the function which it is called upon to perform. It increases in size and strength and shapes itself according to the functional demand placed upon it.

A metallic body, such as a Lane's plate, tends to cause bone atrophy; the bone graft stimulates osteogenesis. In old cases of nonunion the ends of the fragments of bone are already sclerotic,

and fixation by a metal plate will not cause reunion to take place. But a bone graft that spans the sclerotic area and penetrates into good bone at each end will become united to the fragments and will proliferate and grow to a size necessary to the proper function of the bone. In the third place, the plating operation often leads to infection that requires the removal of the plate, while the bone graft is capable of resisting mild infections.

The inlay graft possesses a number of advantages over the intra-medullary graft in the ease and accuracy of its application and in its efficiency in all positions, even when near a joint.

Albee describes in detail his technic of bone transplantation and cities numerous clinical cases to demonstrate the truth of his theories.—*Pediatrics.*

Dislocation of the Semilunar Bone.

Runyan reports on eight cases of this accident which were treated in the Ancon Hospital, and include all of the cases of the past six years, covering approximately one hundred and twenty thousand admissions. He quotes Codman to the effect that the articulations above and below the proximal row of carpal bones account for all of the mobility of the wrist in both extension and flexion, and that each group of articulations is responsible for ninety degree of motion. In either complete flexion or extension the axis of the os magnum forms an angle of ninety degrees to the long axis of the radius, while the interposed semilunar forms an angle of forty-five degrees with both bones. In this position the semilunar is at a mechanical disadvantage, because only the narrowest part of it is in the axis of force, and any increase of the tension beyond the normal has a tendency to squeeze it out of place. The method of reduction which the writer has employed is the same as that recommended by Codman and Chase, and consists of traction upon the hand and hyperextension of the wrist, and, while counter-pressure is made over the dislocated bone on the anterior surface of the wrist, the hand is brought over into complete flexion. Should this precedure fail, it is necessary to cut down upon the semilunar and either reduce or excise it. Of

the five open operations, two were reductions and three were excisions. In no case has he excised any part of the scaphoid. An anterior incision between the flexor tendons of the wrist was used in all instances.—*The Therapeutic Gazette.*

Treatment of Ganglion.

Pakowski says that the old method of Duplay deserves to be revised. By means of a hypodermic, 2 or 3 drops of tincture of iodine are injected into the ganglion and moderate compression made by means of a bandage. If the ganglion has not disappeared in the course of four or five days, the procedure is repeated. More than three injections are never required. The injections are not followed by pain.—*Metabolist.*

Early Recognition of Cancer of the Stomach.

Unless the diagnosis of cancer is made early, surgical intervention can be only in the nature of relief and not of cure. The earlier the stage of the growth, the less positive are its manifestations. Even though the disease assumes considerable proportions, many of the important symptoms may be absent, so that at this stage a correct diagnosis may be impossible. Patients developing this disease are not, as a rule, chronic dyspeptics. The most important symptoms are anorexia, vomiting, pain, hematemesis, melena and occult blood in the stools; dysphagia; loss of flesh; the presence of a palpable tumor; dilatation of the stomach; ascites and edema of the extremities; certain roentgenologic findings and serodiagnosis by the Abderhalden method. Vomiting is of frequent occurrence in gastric cancer. Pain was present in 93.1 per cent of 1,000 cases, and extended more or less over the entire abdomen. Hematemesis occurred in 22 per cent of cases; in 87 per cent the hemorrhages were multiple, and in 10 single. Melena appeared in 18 per cent of the cases. Occult blood in the stools was present in 64.2 per cent. Dysphagia existed in 6 per cent of the cases. Loss of flesh is a sign of considerable value and occurred in 98 per cent of the cases, the loss of flesh varying from 5 to 78 pounds.

In only 30 per cent could a mass be palpated in six months after the appearance of symptoms. Dilatation of the stomach occurred in 40 per cent of the cases, and this condition, when present early, is of great diagnostic value. Ascites and edema of the extremities appeared in 21 per cent of the cases.—*The Journal of the American Med. Assn.*

Epididymotomy for Acute Epididymitis.

A. H. Crosbie and A. Riley state that epididymotomy invariably gives immediate and permanent relief of pain. There are no recurrences after operation unless there is a fresh infection. The course of the epididymitis without question is shortened, as is also the urethritis. Patients are probably less likely to be sterile. Treatment of the urethritis can be begun much earlier. The operation can be safely and successfully done in an outpatient clinic under local anesthesia.—*Medical Record.*

Cerebral Physiology and Its Services in War.

Rothmann refers naturally to the abundant opportunities for the study of cerebral localization from the results of wounds involving the cortex, etc., with especial reference to the more exposed frontal area and speech centers. For example, recently an infantry man, aged 37, received a tangential wound of the left lateral aspect of the frontal region. Eight days later a peculiar akinesia of the right arm was noticeable. In attempting to grasp anything he miscalculated in certain directions, and there was also a suggestion of agraphia. The assumption was of an injury of the second frontal convolution. The patient showed confusion and failure of memory. After enlargement of the wound and removal of a spiculum of bone, the patient instead of improving, became worse and a motor aphasia developed. The dura was then freely exposed and incised, and a cavity opened in the second frontal convolution which contained a blood and cerebral debris. First, the akinesia and speech disturbances disappeared, and next the sensorium disappeared. There still remained an uncer-

tainty of grasp, the hand being carried too far to the right. This condition usually points to a lesion in the second convulsion, provided certain phenomena are absent, and the more decidedly if agraphia and akinesia coexist.—*Medical Record.*

The Antiseptics of War.

Cheatle states that many wounded have arrived in his country in a disgraceful condition after the early application of iodine. He believes that iodine has proved a failure in treating large wounds. He states that he has made perfect a better solution than iodine. It is more efficient and absolutely non-irritating, and can be applied safely to the scrotum, eyelid, and other parts liable to show the results of irritants. Pure carbolic acid can not be applied to skin, and there is every reason to be convinced that, in a wound splashed with mud, the mud and the bacteria it contains are also on the surrounding skin. A friend of the writer's blistered his skin with pure carbolic acid, although it was at once washed off with spirit. The author has seen cases become infected with B. pyocyaneus, although wash with saline solution and hydrogen perodide. The B. pyocyaneus at once disappeared on the application of 1-in-2000 mercury perchloride, or on the application of the rosanline solution. He does not like the constant application of hydrogen peroxide to wounds; the granulation tissue under its influence becomes anemic and swollen. It may have its uses in removing blood-clot and sloughs, but that is another matter.

Cheatle's solution is a mixture of 1-20-carbolic acid and 1-to-500 mercury perchloride in absolute alcohol. It is colored with rosaniline.—*The Therapeutic Gazette.*

MEDICAL

Treatment of Diabetes with Diabeteserin.

M. Wolfheim considers that the vagus plays a not inconsiderable role in the etiology of diabetes. Injury to the vagus centres,

as in Claude Bernard's puncture of the fourth ventricle produces a disturbance in the hepatic circulation followed by glycosuria. Arteriosclerosis, with resulting circulatory disturbances, is often an etiological factor in diabetes. Diabeteserin, containing the alkaloid eserine and salts of Trunecek's serum, is recommended by the author, on the theoretical considerations as well as on clinical experiences, as rational and effective in certain diabetic cases. Eserine exerts a tonic effect on the vagus; salts of Trunecek's serum have for some years been used under a variety of appellations in arterioscerlosis, with favorable results. Wolfheim reports eight cases in which diabeteserin was given. In some, diatetic treatment was simultaneously applied, but in the majority, the effects of diabeteserin were clearly apparent after dietetic measures. Glycosuria was greatly reduced or entirely removed and other symptoms were markedly relieved; these effects showed a tendency to persist, after the remedy had been discontinued. In cases with chronic constipation, a modified diabeteserin containing a small amount of atropine was used.—*Practical Medicine.*

Insect Carriers of Disease.

Everyone now knows that the investigations of the last eighteen years have definitely proved that certain insects are the means of carrying infections from the sick to the well, both in man and the lower animals. But it is quite likely that few of us appreciate the enormous amount of this new knowledge. We hear the news piecemeal and rarely get a summing up. It will therefore be news to most people that at least ten kinds of insects are either known to be carriers or so strongly suspected as to leave little doubt of their guilt—mosquitoes, fleas, body lice, bed bugs, sand flies, Buffalo gnat, biting stable fly, domestic fly, a gnat, tsetse fly and the itch mite. As there are several species of mosquitoes, fleas and lice involved, the number of carriers is between fifteen to twenty. This represents an enormous amount of work, and also an enormous amount of prevention in the following diseases —yellow fever, malaria, plague, cholera, typhoid, Malta fever summer diarrhea, dengue, filariasis, surra, relapsing fever typhus,

Texas fever of cattle, Rock Mountain fever, sleeping sickness, poliomyelitis, kala-azar, anthrax and a host of suppurations, opththalmias and short fevers resembling influenza. Perhaps pellagra, leprosy, hookworm and beriberi might have a relation to insect carriers. This is so important to the welfare of mankind that there has arisen a world-wide campaign against all insects in or near our dwelling places. Of course, we can not exterminate them, but we can confine them to uninhabitated places. We are drifting to an insect free era. If we will not help voluntarily we will eventually be considered public enemies and treated accordingly.—*American Medicine.*

Typhus Fever Germ Isolated.

The Bulletin of the Department of Health of the City of New York states that "Dr. Harry Plotz, of Mt. Sinai Hospital, announced the Isolation of a gram-positive pleomorphic anaerobic bacillus from the blood of 50 per cent of a series of cases of epidemic and endemic typhus fever ((Brill's Disease). The bacilli isolated from both types of the disease are identical in their cultural and serum reactions. The bacilli are found only in small numbers in the blood, but have been isolated during the febrile period and as long as thirty-six hours after the crisis. As the disease progresses the agglutination and the complement fixation reactions become positive using the bacilli or extracts in the tests. Because of the shortness of the disease, these reactions are positive more often during convalescence. When cultures are injected into guinea pigs or monkeys, they cause a febrile reaction similar to that obtained by the injection of blood from a case of typhus fever. The bacilli in cultures quickly lose their virulence. Whether the injection of cultures will protect animals against the inoculation of virulent blood was not stated. The adoption of preventive inoculation with vaccines made from the cultures depends on such immunity tests in susceptible animals.

"While a few points need further study the evidence brought forward by Dr. Plotz and his colleagues at Mt. Sinai Hospital, indicate that the bacillus discovered is the cause of typhus fever." *Virginia Medical Semi-Monthly.*

Rapid Relief in Acute Lumbago by Manipulation and Active Movement.

Haig (*British Medical Jour.*) gives his method of treatment as follows: It consists of (1) deep thumbing of the lumbar muscles, in process of which a painful area is usually found either in the middle line or to one or other side; (2) fixing the part of the vertebral column below this painful region by firm pressure of the thumb on each side of the spine; and (3) making the patient perform movements of flexion, acute dorsiflexion, lateral flexion, and rotation. The result is cure of the attack of lumbago, inasmuch as the patient is able to at once return to his work, and in no case did the writer have to repeat the process. Among the many remedies suggested by authorities on lumbago, remedies so varied as varied as to include purgatives, diuretics, diaphoresia, hot baths, Turkish bath, warm packs, fomentation, hot ironing, iodides, iodine, guaiacum and sulphur, nux vomica in large doses, hypodermics of morphine or cocaine, counter-irritation by cautery or blisters, electricity with massage, acupuncture and porous plasters, the writer only finds two suggestions as to movements. Romer advocates in traumatic lumbago the stretching of the contracted muscles and rupture of the adhesions by forcible movements executed under chloroform. And Chalmers Watson, in the Encyclopedia of Medicine, says: "To those who can not readily obtain the requisite amount of active exercise and fresh air desirable it is advisable to recommend the daily performance of two or three studied muscular movements—movement calculated to bring into play those muscles whose functions through non-use are being abused." Obviously these writers are referring to chronic cases. The writer's method is, he thinks, better, inasmuch as it cures the condition in the acute stage, and prevents it from becoming chronic.—*The Medical Fortnightly.*

Treatment of Infantile Paralysis.

The pathology is a lesion mainly of the anterior horn cells of the spinal cord; with the conclusions based on this pathology the

author is in almost complete disagreement. He contends that the cells are not irreparably damaged in many cases. Little attention has been given to the muscles secondarily affected, yet the muscles are biologically antecedent to the nerve tissue which governs them, and through them the restoration of the nerve tissues should be undertaken. The usual method of testing the involved muscle or muscles is too severe to lead to any useful conclusions and is wrong in principle. Instead of condemning a muscle as totally paralyzed because it is incapable of performing any work when tested at the greatest possible disadvantage to itself, one should carefully determine its residual capacity by testing it in its zero position. The zero position is that which corresponds to a position of the part into which it would normally be brought by the maximum of the normal muscle or, in other words, the position of greatest relaxation of the damaged muscle. This position is to be secured by passive movement. In this position it will usually be found that even the most damaged muscle is still capable of contracting, although possibly very slightly. The treatment should then be based on these biological facts and should proceed as follows. During the acute stage of the disease the affected part should be maintained constantly in the zero position, both to prevent overstretching of the damaged muscles and contraction of the unaffected opponents. When the acute stage has passed the reëducation of the affected muscle and its controlling damaged nerve cells should be undertaken and pursued unremittingly for a long period of time. This reëducation should begin by encouraging voluntary contraction of the muscle in its zero position, very gradually encouraging its development so that it becomes able to move the extremity from a position more and more removed from zero. Finally this will lead to almost, if not quite complete restoration of the function and strength of the most severely damaged muscles and cells. In old cases certain surgical measures may be needed to free the muscles from mechanical interference, but usually surgical measures should not be practiced, particularly those of nerve or muscle grafting—*Pediatrics.*

Alcohol Not an Antidote for Carbolic Acid.

I remember distinctly that I once gave a student a poor mark in his toxicology examination because in giving the antidotes for carbolic acid he failed to mention alcohol. Alcohol was at that time considered the antidote and to fail to mention it was considered a scientific crime. The soluble sulphates which had been considered antidotes before were then rather falling theoretically into disuse. But many of our scientific facts are evidently half-baked and based on insufficient evidence. In a very thorough paper, entitled "An Experimental Study of Lavage in Carbolic Acid Poisoning," Dr. David I. Macht, of the Department of Pharmacology of Johns Hopkins University, reports a number of experiments on animals with various antidotes for carbolic acid and comes to the conclusion that alcohol given after poisoning with phenol will not only not act as an antidote, but will aggravate the symptoms and hasten death. His conclusions are as follows:

"1. The efficiency of lavage in phenol poisoning depends on the quantity of poison taken,on the time after poisoning that the lavage is begun, and on the solution used for washing the stomach.

"2. A strong solution of sodium sulphate appears to be the most useful for the purpose; next in efficiency comes plain water.

"3. The influence of alcohol in phenol poisoning depends on the time of its administration. An animal that is previously intoxicated with alcohol can withstand better the effects of phenol taken afterwards. On the other hand, alcohol administered to an animal after poisoning with phenol will aggravate the symptoms and hasten death.

"4. The use of alcohol in carbolic-acid poisoning should therefore be strongly discouraged."—*Critic and Guide.*

Internal Use of Red Iodide of Mercury in Enlarged Malarial Splene.

Datt, in the *Indian Medical Gazette* for September, 1914, asserts that of all the counter-irritants to the enlarged spleen red iodide

of mercury stands first in reducing it, although there are other counter-irritants of the same nature, but of inferior value in these cases. In Datt's opinion, red iodide acts not by its irritant action in these cases, but by absorption it produces certain changes in the system which cause increased leucocytosis, and thus it effects the cure.

Bearing this view in mind, Datt has been using this drug internally with marked success in several cases for the last two years. It reduces the spleen and improves the health of the patients. He has never seen any bad results from its administration. If it proves equally efficacious in other hands as it did in his, its use will make a considerable reduction in the expenses of the dispensary and at the same time increase the comfort of the patient.

Datt uses this drug alone and only internally in the following way:

Red iodide of mercury, gr. 1-20;
Potass. iodide, gr. ij;
Aqua, dr. iij.

After two weeks he increases the dose to gr. 1-16 per dose

On taking the blood counts, he has found that it increases leucocytosis. The earliest test seen it increased on the tenth day, when the leucocyte count rose from 1,500 to 2,500. The differential counts also show these changes. At first the large monocuclears are not increased, but afterward there is an increase of the large monocuclears with increase of the polymorphonuclears and of the small monocuclears.

Datt would suggest that this drug be tried in kala-azar cases.

He is experimenting with it in healthy men to find whether it increases leucocytosis, and will publish his results on in these cases.—*The Therapeutic Gazette.*

Developments in Scarlatina Therapy.

Within recent years there have been introduced in the treatment of particularly severe cases of scarlet fever two methods that offer considerable promise. One of these is the use of sal-

varsan or neosalvarsan; the other is the employment of the blood serum of convalescent scarlet fever patients. These methods are representative of the two main trends in the treatment of infectious disease, namely, chemotherapy and serum therapy.

Salvarsan was first employed in 1910 by Rumpel in three cases of scarlet fever but without success. Later Lenzmann, Klemperer and Waita, Lorey, Schreiber, and Jochmann employed the same drug and all seemed to agree that salvarsan has a favorable influence on the course of the disease, particularly in controlling the severe angina. The latest to investigate the merits of this mode of treatment is F. Poensgen, who reports his results in the Beitrage zur Klinik der Infektionskrankheiten und zer Immunitatsforschung, Vol. 3, Nos. 1 and 2. His experience comprises 35 cases which represented severe types of the disease. Salvarsan was administered intravenously in 30 of the cases, with positive results in 10, negative results in 15, and doubtful results in five. In the five cases in which neosalvarsan was used the results were negative in all. There was no question that salvarsan saved a large percentage of the particularly severe cases of scarlet fever. In no instance could any unfavorable action of the drug be observed. Complications were, however, neither ameliorated nor prevented, a circumstance explained by the fact that these complications are the result of the action of streptococci which are apparently not affected by the salvarsan. Although of value in some of the severe cases of scarlet fever salvarsan can not be regarded as a specific against this disease.

The favorable results obtained by the use of the blood serum of patients convalescing from scarlet fever were first reported, on the basis of 12 cases thus treated, by Reiss and Jungmann. These results were confirmed in the similar management of 22 cases by R. Koch (Muenchener medizinische Wochenschrift, 1913, No. 47). These cases were all severe ones, and death occurred only in one instance, in the case of a patient who was already in the agonal condition. Even in the late stage of the disease when the local strepococcal manifestations dominate the clinical picture, and in the septic type, a distinctly favorable influence is to be observed. This method of treatment was not responsible for the production of hemorrhagic nephritis.

The results thus far obtained in the treatment of scarlet fever by means of neosalvarsan or convalescent serum are sufficiently encouraging to warrant the further trial of these methods.—*The Medical Fortnightly.*

Uremia.

Strauss states that within the past eighteen months our conception of this subject has been notably modified as a result of continuous study, which goes back a dozen or more years. The conception which then obtained has now become verified, and the result of a study of 200 cases seems to prove beyond a doubt that uremia is an intoxication which stands close relationship with retention of nitrogen in the blood. Despite overwhelmingly positive statistical finds, however, the author is forced to confess that in a few cases uremia occurred without nitrogen retention. As a rule, the healthy man retains from 20 to 40 mg. in 100 c.c. blood serum, while in the uremic man the figures are 60 to 130 mg., according to whether the vascular or tubular form predominates. These facts are now commonly admitted. There are minor points in which authors are not in agreement. For example, the destruction of the kidney in sublimate poisoning is not, as a rule, accompanied by uremia. The latter must be made to signify nitrogen retention in the blood, irrespective of all collateral manifestations. To what extent may this N-retention be manifested clinically? The answer is that only very high values of N-retention may be depended on to give clinical results. Retention of 150 mg. indicates a high degree of renal insufficiency, and is manifested clinically in a variety of ways—coma, convulsions, dyspepsia, asthenia.

Recent authors have devised new varieties, new names, etc., as a result of which a number of conditions have been isolated which resemble true uremia and are known collectively as pseudouremia. The author believes that this division is at present sufficient. The main difference lies in the degree of retention. If this is 150 mg., or upwards, true uremia is present. We may also find the latter with retention as low as 120. Pseudouremia is characterized by

retention nearly normal—not above 80. In the true uremia group we find clinically either asthenia or dyspepsia. Volhard mentions a tic-like form. In this true form convulsions need not occur. So-called pseudouremia comprises both convulsions, and mental states associated with high blood pressure. Uremic convulsions are those which accompany nephritis and nephrosis and for simplicity are called eclampsia. Here we find, as already stated, no extreme retention of nitrogen in the blood; yet dyspepsia is not infrequently seen in either form. In the comatose form bilateral twitchings are encountered. In pseudouremic eclampsia the convulsions often succeed one another rapidly, not only in the acute and subacute nephritis of childhood and adolescence, but also in tubular nephritis or nephroses. Puerperal eclampsia belongs in this category, for the normal retention of nitrogen in the blood is seldom increased. The mental anomalies of the so-called hypertonics lead us to the relationship which subsists between hypertension, arteriosclerosis, and renal disease in elderly subjects. This type may be left out of consideration here—*Medical Record.*

OBSTETRICAL

Prophylaxis of Puerperal Convulsions.

The past two years' hospital work of S. H. Blodgett (*Medical Record*) has demonstrated that clinical symptoms, including the amount of albumin in the urine, are of secondary importance to the urea output in foretelling the probability of convulsions, and that careful watching of such output, and making the changes in the diet thus indicated, will enable one to carry safely to term many cases which otherwise would go on to convulsions or necessitate the induction of labor. To be on the safe side, an examination of a sample of twenty-four hour urine should be made every two weeks from the third to the sixth month of pregnancy, and once a week during the last three months. No doubt a pregnant woman whose physician does not keep careful watch of the urine would be in less danger of convulsions if she were to stop

eating meat and fish during the last six months.—*Chritic and Guide.*

Scopolamine-Morphine in Labor.

The *Lancet-Clinic* of October 24, 1914, contains an article by Tate on this subject. Summing up the whole question as it now stands, the writer believes:

1. That the profession at large will never adopt this treatment, because it is complicated, requires too much time, and is dangerous if not used properly.

2. That it will receive from American obstetricians, who have the opportunities and facilities, a fair and impartial trial.

3. That with proper cases, ideal surroundings, and the case in the hands of a competent obstetrician, many women may be carried through their confinement with little pain, whether they use this treatment or resort to our usual remedies as now employed.

4. That condemnation should not be too strong on the part of the inexperienced and incredulous at the present time.

5. That with the writer's limited number of cases, not treated strictly according to the method laid down by the Freiburg clinic, he is not wholly discouraged, but intends to further study this treatment, and when proper cases present themselves, to try it according to his understanding of its administration, and later on he will be in a position to either condemn or approve with at least satisfaction to himself.—*The Therapeutic Gazette.*

Transfusion in the Treatment of Hemorrhagica Neonatorum.

The *Boston Medical and Surgical Journal* of November 5, 1914, contains an article by Green on this subject. He concludes that:

1. Transfusion is a procedure of definitely established specific curative value in the treatment of hemorrhagic disease of the new-born.

2. By its use the mortality of this disease has been already reduced from 50 to 10 per cent.

3. A probable further reduction of mortality may be expected in future from its more prompt and universal application.

4. Successive improvements and simplifications in the technique of transfusion have now made its performance possible by surgeons of average training, experience, and skill.

5. Even with transfusion, the prognosis in the rare cases of hematuric hemorrhage is apparently much worse than in any other form of bleeding.

6. The greatest present need of further investigation in hemorrhagica neonatorum is into the knowledge of its probably syphilitic etiology.—*The Therapeutic Gazette.*

Arteriosclerosis and Uterine Hemorrhage.

W. P. Healy notes that the common form of treatment for persistent bleeding from sclerosis of the uterine vessels has been hysterectomy. The X-rays, however, are often effective in the control and cure of these hemorrhages and may be used without fear of any harmful effect upon the ovaries, as then patients are all at or beyond the menopause. Recently Kelly and Burnam have reported very excellent results in the cure of uterine hemorrhage by the use of radium. These patients should be given the benefit of treatment by radiation either with X-rays or radium, in which the danger of a serious complication is practically nil, before they are subjected to the risk of an operation as severe as a complete vaginal or abdominal hysterectomy which, under the best conditions, is apt to have a mortality of from two to three per cent.—*Medical Record.*

Chorea in the Pregnant.

Ayres emphasizes that chorea in pregnancy is probably connected with some disturbance in the ductless gland system. The mortality is always high and the prognosis grows graver when

it is accompanied by mental disturbance. He proceeds to compare three cases he has encountered with the data in the literature, and gives the details of his cases. The first patient was a woman of 27 and the chorea came on with a stormy onset and coma for several hours. The choreic movements and convulsions continued a progressive course, only transiently influenced by symptomatic treatment of all kinds, including magnesium sulphate, thyroid treatment, various sedative, neosalvarsan and lumbar puncture. Abortion was early induced but made no difference in the clinical picture, and the chorea progressed to a fatal termination. The woman had been previously healthy except for a tendency to constipation. The Wassermann was negative as likewise examination for gonococci.

The second patient, 18 years old, was also previously healthy and the pregnancy was only of one month's standing. The acute chorea proved fatal the ninth day. The necropsy findings are related in detail, but nothing was found that threw any light on the case. The third patient was 23, and she had noticed the choreic movements almost from the first after conception. At the fourth month they had become so violent she entered the hospital where the uterus was emptied after failure of all other treatment to relieve, and the chorea ceased at once. A year or two later she passed through a normal pregnancy without any return of the chorea or other mishap.—*Jour. of the Amer. Med. Asso.*

The Value of Condensed Milk as a Substitute for the Mother's Milk.

John I. Franz gives the following points which favor the use of condensed milk as a substitute for the mother's milk.

1. Its purity, especially in regards to its low bacterial content—practically zero.

2. Its readiness in handling and small bulk of the stock.

3. Its readiness of preservation, even during the summer months.

4. Uniformity of strength and simplicity in making up the feeding units.

The small percentage of cane sugar in dilutions of condensed milk has been observed to do no harm, and even at its worse, has nothing but a slight laxative effect if not digested.

The emulsion of fat in condensed milk is just as perfect as that of normal cow's milk.

Infants with protein and fat indigestion that were previously on modified milk and did very poorly, were placed on a weak condensed milk mixture and invariably did well, contrary to expectations.—*Medical Review of Reviews.*

Twilight Sleep.

Carter, in the *New Orleans Medical and Surgical Journal* for January, 1915, asserts that we may say that twilight sleep is a delirium. It is the very condition we strive to arrive at, but not the delirium we generally see in alcoholics; rather one of quiet and ease. Violence and wild delirium are due to giving too much of the drug, or giving it in too large a dose. If the patient is watched closely, and the proper amount of the drug administered with the right intervals, it should not cause any alarming symptoms. This does not hold good where there is an idiosyncrasy for the drug. Should the patient have had an overdosage, producing a state of wild delirium and violence, the writer does not think there would be any serious consequences to the mother or to the baby, but it would certainly require the most careful watching. One should be able to tell that the patient is narcotized long before the delirium sets in. The writer admits that this effect upon the family would probably mean the last case of twilight sleep in that family, and probably the loss of practice in that family.

The length of labor is most assuredly shortened. This is one of the reasons why men who have used the twilight sleep, and who have not gotten the results, condemn it. The reason is that their labors were so materially shortened that the scopolamine fell short of its time to act, before delivery took place. The writer has had a number of cases of this character in which the treatment

failed, simply because it hastened the progress of labor to the extent that the drug did not have time to act.

A third of the writer's cases came to forceps, all being primiparæ. Naturally a great majority of the primiparous patients would come to forceps anyway. The writer thinks it unwise to let a head remain on the perineal floor for more than an hour before delivery is attempted. Probably if he had let some of his cases go longer they would have been delivered normally. The objection to the use of forceps is, therefore, an unjustified criticism. Are we practicing medicine to produce or relieve pain? Then why not relieve these patients of pain by the use of forceps? What would your patient say should instrumental delivery be mentioned to her after she has gone under a most strenuous effort at delivery with no result? She would consent to be delivered at once, every time.

These patients are better off in hospitals, and in hospitals especially equipped for this purpose. The writer believes the practice in the home is just as suitable, and even more so, than in some of the hospitals of New Orleans. In New York City several of these cases were tested out in the tenement houses of the poor, where the very poorest of conditions prevail, and where the noise is something terrific. Still, up to the time that Carter left New York, several cases had been given the twilight sleep in these houses with absolute success.

To sum up, for a case to be successful there must be the following requisites: A normal case; absolute quiet; a darkened room; absence from the room of all persons except the nurse and doctor.

Patients must be well in the first stage of labor, with a dilatation of the os not over three fingers in the primipara, and not over two fingers in the multipara.

The drug must be fresh. Careful administration and the necessary amount of the drug.

Finally, to know when the "Dämmerschlaf" condition is assumed by the patient.—*The Therapeutic Gazette.*

Editorial

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All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

STATE CONTROL.

At the last session of the Tennessee State Legislature a bill was passed which created a Board of Examiners whose function is to examine students who wish to study medicine. We already have a State Board of Medical Examiners whose function is to examine graduates of medical schools in order to decide whether they are properly trained to practice medicine. Such state control is a good thing for students, doctors and the public. We believe the entire reputable medical profession is in favor of anything whatever that will raise the standard of physicians. However, we can not help but see the lack of state control over other professions and public officers. Tax assessors, commissioners, mayors, legislators, governors, congressmen and many other officers are appointed or voted into office to manage the morals, health and financies of the people, without any controlling examination and often without any preparation whatsoever. It is strange that the state feels that the medical profession, which has always been represented by the best educated men in every community, which has always at great sacrifice to itself fought disease and ignorance, which, until a few years ago fought quackery single-handed while all the powers of government stood passive; it is strange, we say, that the state feels that the medical profession must be regulated and controlled before the strictly political offices which really

should fall more directly under the control of the state, are regulated in the least. Until there is some definite standard better than the vote of the people or the whim of a politician to regulate our politics and our good men in office regardless of political party, we can not hope the best for our state or our people, no matter how much the state may control our profession. Should all the best physicians in the whole world be transported into Tennessee the health of the state would not become radically improved. Why not? Simply because gross ignorance and lack of training will block the way of any science, and also, because with all the best efforts of the profession it has been impossible to get Congress to create a Federal Board of Health with a representative in the President's Cabinet. Such a board might nullify the ignorance of state officials in regard to medical subjects and in that way help bring about a rapid improvement in the nation's health.

W. T. B.

A Noble Profession.

In a trip of nearly two years duration, comprising about 78,000 miles, twice crossing the Arctic Circle, four times over the Equator, my wife and I had on various occasions to ask aid of the medical profession. Whether this aid was mere information, hospitality, advice, profession or non-professional, it was always granted quickly, pleasantly and wisely. Whether these medical men were British, German, French or Austrian, Belgian or Turk, Russ or Jap, the result was the same, as if American. White, brown or black, the blood which coursed through their arteries seemed always the same. Though at times we could not speak the language of each other, yet there was the language of medicine which seemed universal. In Europe, Asia and Africa, as well as Australia, were old schoolmates and men with whom we had sat. This was not only done with universal kindness and skill but also entirely free the world over. If there another such a profession?—*E. S. McK.*

Cancer Experts to Speak in Vermont.

Program of Meetings at Rutland, Burlington, St. Johnsbury and Montpelier.

Speakers of national prominence have been obtained by the Vermont State Medical Society for its proposed series of educational meetings on cancer to be held in the principal cities of that state early next month. The program calls for an identical series of morning, afternoon and evening meetings to be held at Rutland on June 8, Burlington on June 9, St. Johnsbury on June 10 and Montpelier on June 11. In the morning of each day a clinic will held by the visiting physicians to which local doctors will bring patients for consultation. In the afternoon, the meetings will be for the medical profession, but the evening meetings will be open to the public and the addresses will be popular in character.

Dr. Francis Carter Wood of New York will speak at Burlington on the afternoon and also on the evening of June 9 and will take part in the clinic at Burlington on June 9 and St. Johnsbury on June 10. Dr. Wood is the Director of the Cancer Research Work of Columbia University, which enjoys, in the George Crocker Special Research Fund, the most considerable endowment for cancer research in this country, if not in the world. In the special laboratory buildings recently opened on Morningside Heights the search into the mysteries of cancer is being pursued with all the equipment and methods known to science. One of the features of the work at the Columbia Laboratory is the facilities offered to practising physicians to keep themselves informed as to the latest developments in the methods of diagnosis of cancer in its early stages.

Dr. J. M. Wainwright of Scranton, Pa., will take part in the morning clinics on June 9, and at St. Johnsbury on June 10, and will address the physicians at the afternoon meetings in these cities and also in Rutland on June 8 and Montpelier on June 11. Dr. Wainwright has long been the Chairman of the Cancer Commission of the Pennsylvania State Medical Society, under whose auspices one of the first educational movements in America in

regard to this disease was organized and carried on. Both Dr. Wainwright and Dr. Wood are directors of the American Society for the Control of Cancer which is coöperating with the Vermont Medical Society in the arrangements for these meetings.

Dr. Charles F. Dalton, Secretary of the Vermont State Board of Health, will speak at the public evening meeting on all four days, officially representing the State Health Department.

Dr. W. S. Bainbridge of New York will be the principal speaker at the evening meetings at Rutland, St. Johnsbury and Montpelier.

The Campaign Against Cancer in New England.

The New England states generally show a higher death rate from cancer than any other group of states. This does not mean that New England people are more susceptible to this disease. Cancer is a disease of later adult life and it is well known that in parts of England there are more old people proportionately to the population than in many other regions. Nevertheless, the death rates recently published in the U. S. Census Bureau have stimulated much activity in these states in the educational campaign for the control of malignant disease.

What are the facts upon which this movement is based? According to the report of the Census Bureau, in 1913 there were 49,928 deaths from cancer in the registration area of the United States, corresponding to a death rate of 78.9 per 100,000 of the population.

All the New England states have individual cancer death rates much higher than this. Connecticut's rate, which was the lowest of any of the New England states, was 85.1. Vermont's rate was the highest, with 111.7, while the rates of the other states were correspondingly high, Maine having a rate of 107.5, New Hampshire 104.4, Massachusetts 101.4 and Rhode Island 93.3. When these figures are compared with those of Kentucky, with a rate of 48, they seem indeed very high. They mean that 6,817 people died in 1913 in New England from cancer. But it does not necessarily follow that cancer is more common in New England than elsewhere. The Census Bureau attributes the high cancer death

rates in certain districts to the relatively high age distribution of the population and the negligible amount of immigration.

Translated into everyday terms this means that in New England the proportion of people over forty years of age, or at the cancer age, to those under forty, and so less liable to cancer, is greater than in other places. Yet there is no doubt that the cancer death rate in New England as well as in other parts of the country is much higher than it ought to be. Without question a large percentage of cancer deaths can be prevented by early recognition of the symptoms and prompt recourse to competent surgical advice and treatment. Cancer is not a hopeless, incurable affection, as so many people wrongly believe. Those who know the facts believe that if the public can be properly educated in regard to the early signs of the disease and will act on this knowledge, the present mortality should be reduced at least half and perhaps two-thirds.

That New England is awake to this opportunity of saving lives is evident from the activity in several states. To protest against taxation without representation the patriots of Massachusetts dumped overboard the famous cargo of tea. Vermont medical men have become so concerned over the high cancer death rate of their state that they are going to hold a "tea-party" of another sort and attempt to dump overboard the high death rate from malignant disease. While their action is not so dramatic as that of the patriot raiders they hope to prove that through its great ultimate benefit to the community it will be almost as patriotic. The New Hampshire State Board of Health has recently published sound advice in its Bulletin. In Maine an active committee of the State Medical Society is arranging public lectures and causing the publication of instructive articles in the newspapers. Massachusetts has a well organized branch of the American Society for the Control of Cancer, with headquarters in Boston. The Vermont State Medical Society has arranged a series of public meetings to spread the bad news of the high cancer death rate and the good news of the hope of controlling the disease by earlier recognition and prompt surgical treatment. Morning, afternoon and evening meetings will be held on Tuesday, Wednesday, Thursday

and Friday, June 8 to 11, at Rutland, Burlington, Montpelier and St. Johnsbury. The Vermont State Board of Health will send its Secretary, Dr. Charles F. Dalton, to address each of these meetings and the American Society for the Control ofCancer will be represented by Dr. Francis Carter Wood, Director of Cancer Research at Columbia University, New York City, and by Dr. J. M. Wainwright, Chairman of the Cancer Committee of the Pennsylvania State Medical Society.

Publisher's Department

War Prices.

The enormous advance in the price of drugs, owing to the European war, is well exemplified in the bromide salts. Bromide of potassium, for instance, which sold before the war at 35c a pound, is now quoted at $1.25 per pound, and the other salts have ad-advanced in proportion. The very high price and scarcity of these salts is a great temptation for substitution. The safe way for the physician is to prescribe Peacock's bromides, which, in spite of the great advance in the cost of manufacture, is still sold at the old price. Its formula has not been changed and this is a guarantee of uniformity and purity.

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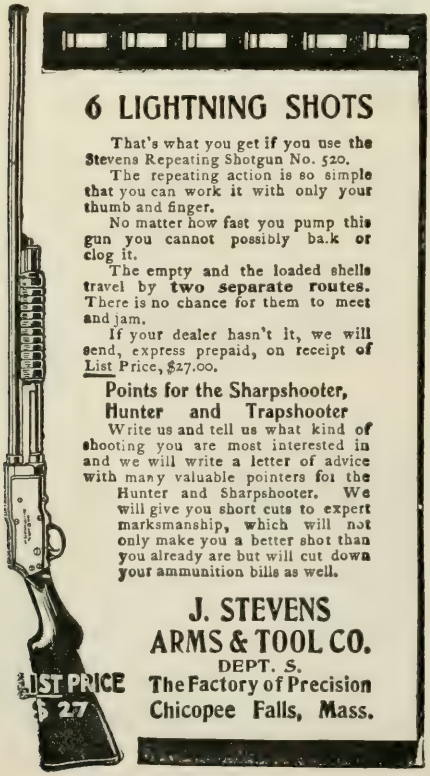

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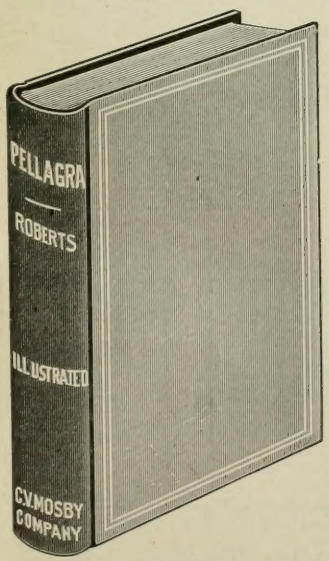

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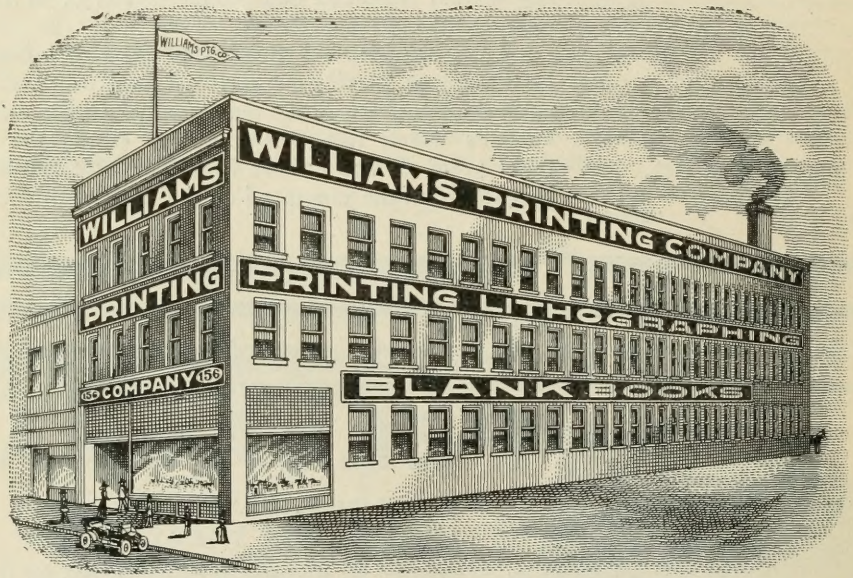

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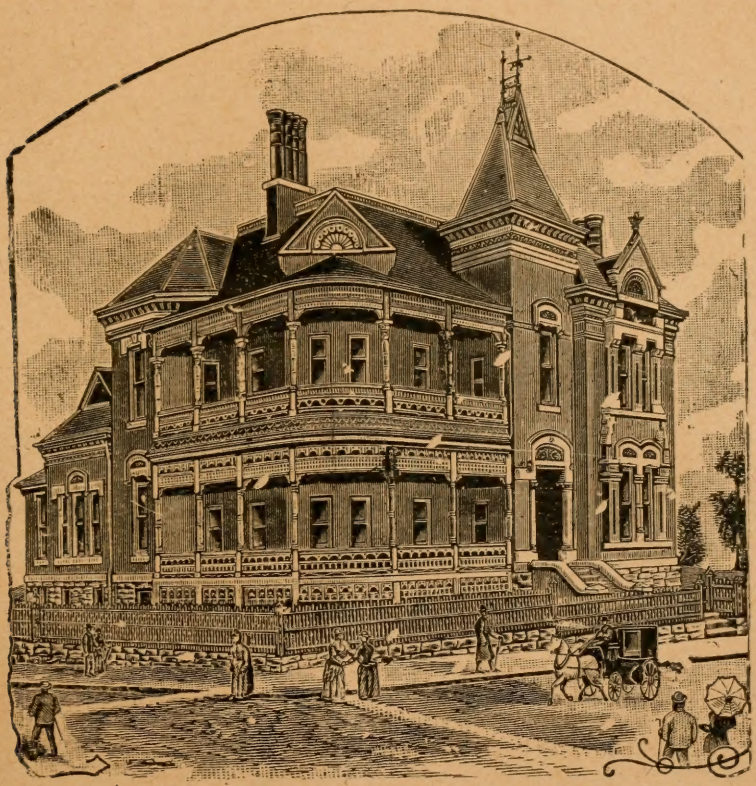

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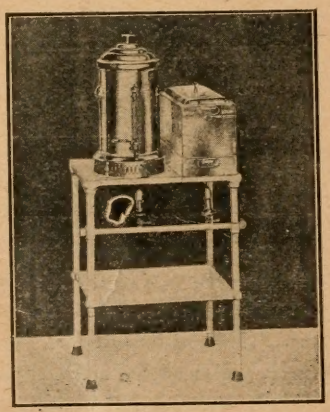

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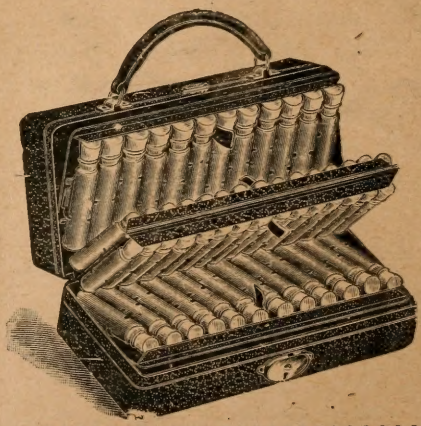

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